



**MINISTERIAL DELEGATE STATEMENT OF COMPLIANCE
WITH THE CERTIFICATION BASIS**

**DÉLÉGUÉ MINISTÉRIEL CONSTAT DE CONFORMITÉ
AVEC LA BASE DE CERTIFICATION**

1. Reference No. / N° de référence NAPA File C-11-0786	2. Applicant Name / Nom de demandeur Aero Design Project # 704		
Part 1: Identification of Aeronautical Product Partie 1 : Identification des produits aéronautiques			
3. Applicable Design Approval Document No. / N° du document d'approbation de la conception applicable H-92			
4. Model No. / N° de modèle 206L, 206L-1, 206L-3, 206L-4, 407	5. Make / Marque Bell Helicopter Textron Canada Ltd.		
6. Type (aircraft, engine, propeller, appliance, part) / Type (aéronef, moteur hélice, appareillage, pièce) Helicopter			
Part 2: Substantiating Reports and Data Partie 2 : Rapports et des données pertinentes			
7. Number / Numéro DCL704 Revision 7	8. Title / Titre Document Control List, and all documents referenced therein.		
9. Purpose of Finding of Compliance / But de la constat de conformité			
<input type="checkbox"/> New approval: <input type="checkbox"/> Supplemental Type Certificate <input type="checkbox"/> Supplemental Type Certificate-Limited <input type="checkbox"/> Repair Design Certificate <input type="checkbox"/> Other: Update to modification configurations of cargo baskets			
<input type="checkbox"/> Revise existing approval # SH00-48 No The revised data requires the revision of the approval document. Yes The revised data is within the scope of the accepted Certification Plan.			
10. Applicable Elements of Certification Basis / Éléments applicables de la base de certification			
<input checked="" type="checkbox"/> Certification Plan: CP945 <input type="checkbox"/> Letter of exemption of delegation, dated:			
Part 3: Ministerial Delegate Finding of Compliance with the Certification Basis Partie 3 : Délégué ministériel constat de conformité avec la base de certification			
Under the authority vested in me by the Minister under subsection 4.3(1) of the <i>Aeronautics Act</i> , I hereby find that the type design of the aeronautical product is in compliance with the certification basis as demonstrated by the applicant's substantiating reports and data to the best of my knowledge.		En vertu des pouvoirs qui m'ont été conférés par le ministre conformément au paragraphe 4.3(1) de la <i>Loi sur l'Aéronautique</i> , j'estime que, à ma connaissance, la définition de type du produit aéronautique est conforme à sa base de certification tel qu'il a été démontré par les rapports et les données pertinentes fournis par le demandeur.	
11. Signature of Delegate(s) Signature des délégués	12. Name / Nom E. Burgoine, Aero Design Ltd.	13. Delegate No. / N° de délégué DAR 290M	14. Date (yyyy-mm-dd) Date (aaaa-mm-jj) 2011-11-22

Sheet 1 of 2

**MINISTERIAL DELEGATE STATEMENT OF COMPLIANCE
WITH THE CERTIFICATION BASIS****DÉLÉGUÉ MINISTÉRIEL CONSTAT DE CONFORMITÉ
AVEC LA BASE DE CERTIFICATION**

Block 7 (continued from sheet 1)

Document Number	Revision	Title	Comment
DCL704	7	Document Control List	
70403	4	Auxiliary Latch Modification	
70404	2	Open Forward End Modification (Bell 206L/407 Quick Release)	
70405	3	Lid Step Modification	
70406	2	Open Forward End Modification (AS350/206B Quick Release)	
70411	0	Open Forward End Modification (Bell 206L/407 Quick Release)	
70412	0	Gas Spring Modification	
70422	0	Gas Spring Provisions Modification	

Documents listed below this line (if any) cannot be approved by the delegate:

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification (Bell 206L/407 Fixed and McDonnell Douglas MD600N Quick Release Only)	1 ✓
70402	Lid Door Modification	1 ✓
70403	Auxiliary Latch Modification	4 ✓
70404	Open Forward End Modification (Bell 206L/407 Quick Release Only)	2 ✓
70405	Lid Step Modification	3 ✓
70406	Open Forward End Modification (Eurocopter AS350/AS355 and Bell 206B Quick Release Only)	2 ✓
70407	Open Forward End Modification (Eurocopter EC135 Quick Release Only)	0 ✓
70408	Installation, Hanger Wheel	0 ✓
70411	Open Forward End Modification (Bell 206L/407 Quick Release Only)	0 ✓
70412	Gas Spring Modification	0 ✓
70422	Gas Spring Provisions Modification	0 ✓
70428	Assembly, Hanger Wheel	0 ✓
70438	Parts, Hanger Wheel	0 ✓
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0 ✓
APPROVAL:		
	ORIGINAL DATE: 10 May 2006	AERO DESIGN LTD. 2013 – 39 th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	REVISION DATE: 27 October 2011	SHEET 1 OF 1
Cargo Basket Modifications		Rev.
DCL704		7

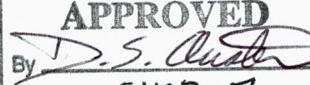
FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: AE704 Initial Issue Date: 25 May, 2006 Revision: 6 Revision Date: 20 October 2010 Approval No.: SH00-48 Delegation No.: 290M Delegate Name: E. Burgoin Classification of Designee: Employer: AERO Design Ltd.	
Aircraft Mfgr: Bell Helicopter Textron Aircraft Model: 206L / 407 Registration: All Eligible		Model Type Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>	
LIST OF APPROVED REPORTS AND DATA			
Document Number	Document Title		Compliance Status
DCL704	Revision 6	Document Control List and all documents referred to therein	
70401	Revision 1	Open Front End Modification	
70402	Revision 1	Lid Door Modification	
70403	Revision 3	Auxiliary Latch Modification	
70404	Revision 1	Open Front End Modification	
70405	Revision 2	Lid Step Modification	
70408	Revision 0	Hangar Wheel Installation	
70428	Revision 0	Hangar Wheel Assembly	
70438	Revision 0	Hangar Wheel Parts	
ER 704.02	Revision 0	Engineering Report	
DATA APPROVED BY TRANSPORT CANADA			
CERTIFICATION			
UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIREMENTS.			
I THEREFORE <input type="checkbox"/> RECOMMEND FOR APPROVAL OF THESE DATA <input checked="" type="checkbox"/> APPROVE THESE DATA			
 E. Burgoin, DAR 290M			

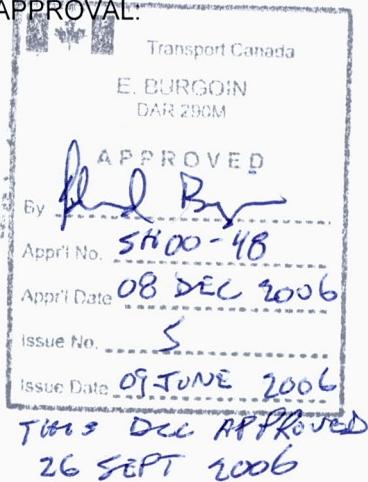
DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification	0
70402	Lid Door Modification	1
70403	Auxiliary Latch Modification	1
70404	Open Forward End Modification	1
70405	Lid Step Modification	1
70406	Open Forward End Modification	0
	<p>70401 & 70404 ARE NOT APPLICABLE TO AS350 AS350 PER SH08-16. SEE AE-100 AE704</p> <p style="text-align: right;"><i>DJ.</i></p>	
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0
APPROVAL:		
 <p>The stamp is rectangular with a double border. Inside, there is a small Canadian flag icon. The text "Transport Canada" is repeated twice, once on each side of the center. Below this, it says "AIRCRAFT CERTIFICATION DIVISION". A large signature "D.S. Austin" is written across the center. Handwritten text below the stamp includes "APPROVED", "By", "Appr'l No.", "SH08-16", "Appr'l Date", "08-04-11", "Issue No.", "1", and "Issue Date" followed by "08-04-11" and "YY-MM-DD".</p>	ORIGINAL DATE: 10 May 2006 REVISION DATE: 19 March, 2008	<p style="text-align: center;">AERO DESIGN LTD. 2013 – 39th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333</p>
	SHEET 1 OF 1	Cargo Basket Modifications
	DCL704	Rev. 2

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification (Bell 206L/407 Fixed Basket only)	0
70402	Lid Door Modification	1
70403	Auxiliary Latch Modification	2
70404	Open Forward End Modification (Quick Release Basket)	1
70405	Lid Step Modification	1
70406	Open Forward End Modification (Eurocopter AS350/AS355 Quick Release Only)	0
70407	Open Forward End Modification (Eurocopter EC135 Quick Release Only)	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0
APPROVAL:		
 Transport Canada Transports Canada AIRCRAFT CERTIFICATION DIVISION APPROVED  By <u>D.S. Austin</u> App'l No. <u>SH07-56</u> App'l Date <u>07-12-24</u> Issue No. <u>2</u> Issue Date <u>08-09-30</u> YY - MM - DD	ORIGINAL DATE: 10 May 2006 REVISION DATE: 31 July, 2008	AERO DESIGN LTD. 2013 – 39 th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	SHEET 1 OF 1	Cargo Basket Modifications
	DCL704	Rev. 3

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401 70402 70403 70404 70405	Open Forward End Modification Lid Door Modification Auxiliary Latch Modification Open Forward End Modification Lid Step Modification	0 0 0 0 0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0
APPROVAL: 	<p>ORIGINAL DATE: 10 May 2006</p> <p>REVISION DATE: 21 September, 2006</p>	<p>AERO DESIGN LTD. 2013 – 39th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333</p>
	SHEET 1 OF 1	Cargo Basket Modifications
	DCL704	Rev. 1

**Structural Consideration for the
Installation of the Hanger Wheel on
AERO Design Baskets.**

Reference Drawings: 70408 – Installation
70428 – Assemblies
70438 – Parts

Introduction:

The Hanger Wheel Installation is intended to operate as a ground support aid when the basket is detached from the helicopter.

The Hanger Wheel Assembly and Installation:

The combined weight of Hanger Wheel assembly is 0.8lbs. The Hanger Wheel is an assembly of an aluminum adaptor plate and a caster. These parts are assembled with four (4) stainless steel #10 screws and self locking nuts. This assembly is installed onto the basket with four (4) AN3 bolts and self locking nuts. This installation bares no load during all phases of flight and during landings and take-offs. It does not touch the ground.

Effects to the Basket:

The Hanger Wheel clamps onto the existing basket structure; no intrusive modification occurs to the basket during installation. The Hanger Wheel has no effect on the operation or strength of the basket.

SENDER RETAIN THIS COPY / COPIE DE L'EXPÉDITEUR

SENDER ACCOUNT NO. N° DE COMPTE DE L'EXPÉDITEUR 4367155		IMPORTANT - TÉLÉPHONE (403) 250 8027	
SENDER (FROM) / EXPÉDITEUR (DE) AERO DESIGN STREET ADDRESS / ADRESSE (N° ET RUE) 2013 39 AVE NE			
CITY / VILLE CALGARY		PROV./STATE/ETAT ALTA	POSTAL / ZIP T2E 6R7
RECEIVER (TO) / DESTINATAIRE (À) OMEGA AVIATION STREET ADDRESS / ADRESSE (N° ET RUE) 4360 AGAR DRIVE			
CITY / VILLE RICHMOND		PROV./STATE/ETAT BC	POSTAL / ZIP V7B 1A3
ATTN: (NAME / DEPT.) / À L'ATTENTION DE (NOM / SERVICE) SHAWN JOHNSON 6042735311			
DESCRIPTION (INCLUDING DANGEROUS GOODS / INCLANT MARCHANDISES DANGEREUSES) BASKET MOD KIT			
SENDER REFERENCE (IF ANY) / REF. DE L'EXPÉD. 69215963 0008		PICK UP / CUEILLETTE - N° DE CONF. X SAWYER X	

SENDER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR

SEE CONDITIONS OF CARRIAGE ON REVERSE / CONDITIONS DE TRANSPORT AU VERSO

SHIP MODE / MODE DE TRANSPORT		BILL OF LADING NO. -NOT NEGOTIABLE N° DE CONNAISSEMENT -NON NÉGOCIABLE	
AIR AÉRIEN <input checked="" type="checkbox"/>		GROUND ROUTIER <input type="checkbox"/>	
PKG / EMBAL.		SERVICE	
1 CHOOSE 1 CHOISIR	PURO- LETTER <input type="checkbox"/>	9 AM 9 h <input checked="" type="checkbox"/>	
	PURO- PAK <input type="checkbox"/>	10:30AM 10 h 30 <input type="checkbox"/>	
OTHER AUTRE <input checked="" type="checkbox"/>	SAT. SAM. <input type="checkbox"/>		
	PAYMENT / PAIEMENT		
CASH COMPTANT <input type="checkbox"/>		CREDIT CARD CARTE DE CRÉDIT <input type="checkbox"/>	
RECEIVER OR THIRD PARTY ACCOUNT NO. / N° DE COMPTE DU DESTINATAIRE OU TIERS 3RD PARTY TIERS <input checked="" type="checkbox"/>			
SENDER EXPÉDITEUR		THIRD PARTY BILLING NAME & ADDRESS / FACTURATION À UN TIERS (NOM & ADRESSE)	
#/Nbre PCS (4 MAXIMUM)	WEIGHT / POIDS SUBJ. TO CORR/ SUJET À CORR.		CHARGES FRAIS TOTAL AMOUNT / MONTANT TOTAL
1	KG	LB	2
DECLARED VALUE / VALEUR DÉCLARÉE (SURCHARGE APPLIES OVER \$100) (SUPPLEMENT AU-DESSUS DE 100 \$)			
\$	\$5,000 MAX. MAX 5 000 \$		LIMITATION OF LIABILITY - IMPORTANT - PLEASE READ THE AMOUNT OF ANY LOSS OR DAMAGE FOR WHICH THE CARRIER MAY BE LIABLE SHALL NOT EXCEED \$2.00 PER POUND (OR \$4.41 PER KILOGRAM) COMPUTED ON THE TOTAL WEIGHT OF THE SHIPMENT UNLESS A HIGHER VALUE IS DECLARED ON THE FACE OF THE BILL OF LADING BY THE CONSIGNOR (SENDER). MAXIMUM DECLARED VALUE SHALL NOT EXCEED \$5,000. N.B. NOTE CAREFULLY CONDITIONS ON BACK HEREOF INCLUDING LIMITATIONS AND EXCLUSIONS OF CARRIER'S LIABILITY, WHICH ARE HEREBY ACCEPTED.
LIMITATION DE RESPONSABILITÉ - IMPORTANT - LISEZ S.V.P. LE MONTANT DE TOUTE Perte OU DOMMAGE DONT LE TRANSPORTEUR POURRAIT ÊTRE RESPONSABLE NE DOIT PAS EXCÉDER 2,00 \$ LA LIVRE (OU 4,41 \$ LE KILOGRAMME). CALCULE SUR LE Poids TOTAL DE L'EXPÉDITION, À MOINS QU'UNE VALEUR SUPÉRIEURE N'AIT ÊTÉ DÉCLARÉE SUR LE RECTO DU CONNAISSEMENT PAR L'EXPÉDITEUR. LA VALEUR DÉCLARÉE MAXIMALE NE DÉPASSERA PAS 5 000 \$. N.B. Veuillez PRENDRE CONNAISSANCE DES CONDITIONS AU VERSO, Y COMPRIS LES LIMITATIONS ET EXCLUSIONS DE RESPONSABILITÉ DU TRANSPORTEUR, QUI SONT ACCEPTÉES PAR LES PRÉSENTES.			
PLEASE REFER TO BILL OF LADING NUMBER FOR SHIPMENT STATUS / INQUIRIES. POUR TOUT RENSEIGNEMENT, Veuillez NOUS COMMUNIQUER LE NUMERO DE CONNAISSEMENT.			

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Service Instruction

Retro-fittings Open Forward End Modification

Bell 206L / 407 Cargo Basket Assembly, Part no. 49205-01

Instructions for Modifying 206L/407 Cargo Basket Body Assembly, Part no. 49208-01

Preparation

- 1) Remove Cargo Basket Assembly, part no. 49205-01 from forward and aft support beams. Stow attachment hardware.
- 2) Disconnect Lid Brace Assembly, part no. 36280-01, from Cargo Basket Body sub-assembly, part no. 49208-01. Stow attachment hardware.
- 3) Remove Cargo Basket Lid sub-Assembly, part no. 49207-01 by removing CR3213-4-02 rivets securing hinge to basket.
- 4) Strip powder coating from Cargo Basket Body sub-assembly, part no. 49208-01 and sand blast to facilitate welding and re-coating.

Note: This is best done by a service company providing powder coating services.

Modification

- 5) Position $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 into forward hoop of basket as shown on drawing 70401 and determine where the tubing and mesh needs to be cut. Tubing has been left long to facilitate cutting the mesh along intersections in mesh as shown on drawing 70401. Mark cut line on tubing with felt marker. Mark cut line on mesh with felt marker.
- 6) Cut ends of $\frac{1}{2}$ " tubing as marked in 5) above.
- 7) Cut mesh on front end of basket through intersections as marked in 5) above. Grind welds securing mesh on front end of basket to forward hoop to free the mesh locally where $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 are to be welded to forward hoop of the Cargo Basket Body sub-assembly, part no. 49208-01. Grind off only as many welds as required to gain access for welding. Bend mesh out of the way only enough to facilitate welding. Remove any excess weld material remaining on the $\frac{1}{2}$ " square tube.

Note: a) If mesh is damage during this process it must be replaced.
b) When grinding welds securing mesh take care not to grind into $\frac{1}{2}$ " tube material.

- 9) Weld in $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 as shown on drawing 70401.

Note: c) Welding to be completed by GTAW method to AMS 2685C by Transport Canada approved welding facility.

- 10) Bend mesh on front end of basket back into position. Weld intersections of mesh to $\frac{1}{2}$ " square tubing – all locations.
- 11) Dress out any sharp edges remaining at weld locations

Re-Assembly

- 12) Powder coat Cargo Basket Body sub-assembly, part no. 49208-01 (original colour “sky white”).
- 13) Re-install Cargo Basket Lid sub-Assembly, part no. 49207-01 using CR3213-4-02 rivets provided.
- 14) Re-connect Lid Brace Assembly, part no. 36280-01, to Cargo Basket Body sub-assembly, part no. 49208-01 using existing hardware.
- 15) Attach completed Cargo Basket Assembly, part no. 49205-01 to forward and rear support beams using existing hardware.

Modification Parts List

- a) Drawing 70401, Modification drawing
- b) Part no. 70401-03, $\frac{1}{2}$ " square tube - 1 piece
- c) Part no. 70401-04, $\frac{1}{2}$ " square tube - 1 piece
- d) Part no. 70401-05, mesh – forward end - 1 piece (replacement if required)
- e) ER70S-2, weld rod - 2 length 1/16" diameter
- f) CR3213-4-02, rivets - 25 req'd

Service Instruction
Retro-fittings Open Forward End Modification
Bell 206L / 407 Cargo Basket Assembly, Part no. 49205-01

Instructions for Modifying 206L/407 Cargo Basket Body Assembly, Part no. 49208-01

Preparation

- 1) Remove Cargo Basket Assembly, part no. 49205-01 from forward and aft support beams. Stow attachment hardware.
- 2) Disconnect Lid Brace Assembly, part no. 36280-01, from Cargo Basket Body sub-assembly, part no. 49208-01. Stow attachment hardware.
- 3) Remove Cargo Basket Lid sub-Assembly, part no. 49207-01 by removing CR3213-4-02 rivets securing hinge to basket.
- 4) Strip powder coating from Cargo Basket Body sub-assembly, part no. 49208-01 and sand blast to facilitate welding and re-coating.

Note: This is best done by a service company providing powder coating services.

Modification

- 5) Position $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 into forward hoop of basket as shown on drawing 70401 and determine where the tubing and mesh needs to be cut. Tubing has been left long to facilitate cutting the mesh along intersections in mesh as shown on drawing 70401. Mark cut line on tubing with felt marker. Mark cut line on mesh with felt marker.
- 6) Cut ends of $\frac{1}{2}$ " tubing as marked in 5) above.
- 7) Cut mesh on front end of basket through intersections as marked in 5) above.
- 8) Grind welds securing mesh on front end of basket to forward hoop to free the mesh locally where $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 are to be welded to forward hoop of the Cargo Basket Body sub-assembly, part no. 49208-01. Grind off only as many welds as required to gain access for welding. Bend mesh out of the way only enough to facilitate welding. Remove any excess weld material remaining on the $\frac{1}{2}$ " square tube.

Note: a) If mesh is damage during this process it must be replaced.
b) When grinding welds securing mesh take care not to grind into $\frac{1}{2}$ " tube material.

- 9) Weld in $\frac{1}{2}$ " square tubing, part no. 70401-03 and 70401-04 as shown on drawing 70401.

Note: c) Welding to be completed by GTAW method to AMS 2685C by Transport Canada approved welding facility.

- 10) Bend mesh on front end of basket back into position. Weld intersections of mesh to $\frac{1}{2}$ " square tubing – all locations.
- 11) Dress out any sharp edges remaining at weld locations

Re-Assembly

- 12) Powder coat Cargo Basket Body sub-assembly, part no. 49208-01 (original colour “sky white”).
- 13) Re-install Cargo Basket Lid sub-Assembly, part no. 49207-01 using CR3213-4-02 rivets provided.
- 14) Re-connect Lid Brace Assembly, part no. 36280-01, to Cargo Basket Body sub-assembly, part no. 49208-01 using existing hardware.
- 15) Attach completed Cargo Basket Assembly, part no. 49205-01 to forward and rear support beams using existing hardware.

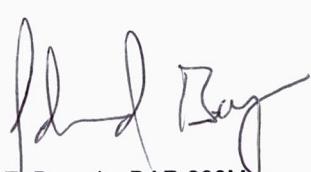
Modification Parts List

- a) Drawing 70401, Modification drawing
- b) Part no. 70401-03, $\frac{1}{2}$ " square tube - 1 piece
- c) Part no. 70401-04, $\frac{1}{2}$ " square tube - 1 piece
- d) Part no. 70401-05, mesh – forward end - 1 piece (replacement if required)
- e) ER70S-2, weld rod - 2 length 1/16" diameter
- f) CR3213-4-02, rivets - 25 req'd

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401 70402 70403	Forward End Modification Lid Door Modification Auxiliary Latch Modification	0 0 0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0
APPROVAL:		
 Transport Canada  Transports Canada AIRCRAFT CERTIFICATION DIVISION <u>APPROVED</u> By <u>D. S. Austin</u> App'l No. <u>S400-48</u> App'l Date <u>06-12-08</u> Issue No. <u>5</u> Issue Date <u>06-06-09</u> YY - MM - DD	ORIGINAL DATE: 10 May 2008 REVISION DATE: 	AERO DESIGN LTD. 2013 – 39 th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333
	SHEET 1 OF 1	Cargo Basket Modifications
		Rev.
	DCL704	0

FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: AE704 Initial Issue Date: 25 May, 2006 Revision: 0 Revision Date: Approval No.: SH00-48 Delegation No.: 290M Delegate Name: E. Burgoine Classification of Designee: Employer: AERO Design Ltd.	
Aircraft Mfgr: Bell Aircraft Model: 206L Series, 407 Registration: All Eligible		Model Type Airplane <input type="checkbox"/> Helicopter <input checked="" type="checkbox"/> Appliance <input type="checkbox"/> Component <input type="checkbox"/>	
LIST OF APPROVED REPORTS AND DATA			
Document Number	Document Title		Compliance Status
DCL704 ER704.02 70401 70402 70403	Revision 0 Revision 0 Revision 0 Revision 0 Revision 0	Document Control List and all documents referred to therein Engineering Report Forward End Modification Lid Door Modification Auxiliary Latch Modification	
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CERTIFICATION			
UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIREMENTS.			
I THEREFORE <input type="checkbox"/> RECOMMEND FOR APPROVAL OF THESE DATA <input checked="" type="checkbox"/> APPROVE THESE DATA			
 E. Burgoine, DAR 290M			

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FABRICATION DOCUMENTS		
70401 70402 70403	Forward End Modification Lid Door Modification Auxiliary Latch Modification	0 0 0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0
APPROVAL:	ORIGINAL DATE: 10 May 2006 REVISION DATE: SHEET 1 OF 1	AERO DESIGN LTD. 2013 – 39 th Ave NE, Calgary, Alberta, T2E 6R7 Ph. (403) 250-8027 Fax. (403) 250-8333 Cargo Basket Modifications Rev. DCL704

AERO Design Ltd.

**ENGINEERING REPORT
ER704.02**

**CARGO BASKET
LID DOOR MODIFICATION**

Approved: E. Burgoine, P. Eng.

Revision 0
Date: 24 February, 2006

AERO Design Ltd.
Engineering Consultants

2013 – 39th Avenue N.E., Calgary, Alberta T2E 6R7
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E-Mail: aerodesign@telusplanet.net

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1.0 INTRODUCTION

A modification allowing an opening in the lid has been requested by an operator of the low mounted cargo basket. A piece of equipment is too tall to fit inside the basket and allow the lid to latch.

The solution is a door in the lid that can be opened when equipment is carried that is too tall for the lid to close, and that can be closed when not required.

2.0 REFERENCE

AERO Design Ltd. Drawing 70402

3.0 BASIS OF CERTIFICATION

Bell 407, TCDS H-92 (Highest of Bell 206L series and 407):

FAR part 27, dated October 2, 1964 Amendment 27-1 through 27-30; Paragraph 27.561(b)(3) at Amdt 27-24; Section 27.563 at Amdt. 27-25; Section 27.785 at Amdt 27-24; Section 27.1093 at amendment 27-8; and Section 27.173 and 27.175 at amendment 27-1.

Exemptions to FAR 27 are the deletion of sections: 27.562, 27.1195, and 27.952(b)(1).

This installation:

Same as the basis of certification as shown the Type Certificate Data Sheet.

4.0 LOADS

Since the occupants of the helicopter are not endangered by objects escaping from the basket upward during an emergency landing, the upward emergency landing load condition is not required.

The negative maneuvering condition (FAR 27.337) does apply. Only the basket contents are required, as the requirement is that the lid remains closed under the maneuvering condition. The entire basket lid was demonstrated to remain closed in TR362.02.

$n_{man_neg} = 1.0$ Negative maneuvering load factor (Ref: FAR 27.337)

$n_{sf} = 1.5$ Safety factor (Ref: FAR 27.303)

$W_{cargo} = 200 \text{ lb}$ Max. cargo load in basket (Ref: Placard on lid)

$W_{bay} = 75 \text{ lb}$ Max. load per bay in basket (Ref: Placard on lid)

$$P_{door} = W_{bay} \times n_{man_neg} \times n_{sf}$$

$P_{door} = 112.5 \text{ lb}$ Ultimate load on door

5.0 TEST

Structural compliance of the lid door is shown by test. The basket was placed lid down on 2 x 4's on a table.



Figure 1 – Test Setup

Bags of lead shot, 25 lb. each, were stacked on the lid door. A total of 8 bags (200 lb.) was stacked on the lid door.



Figure 2 – Test (Side View)

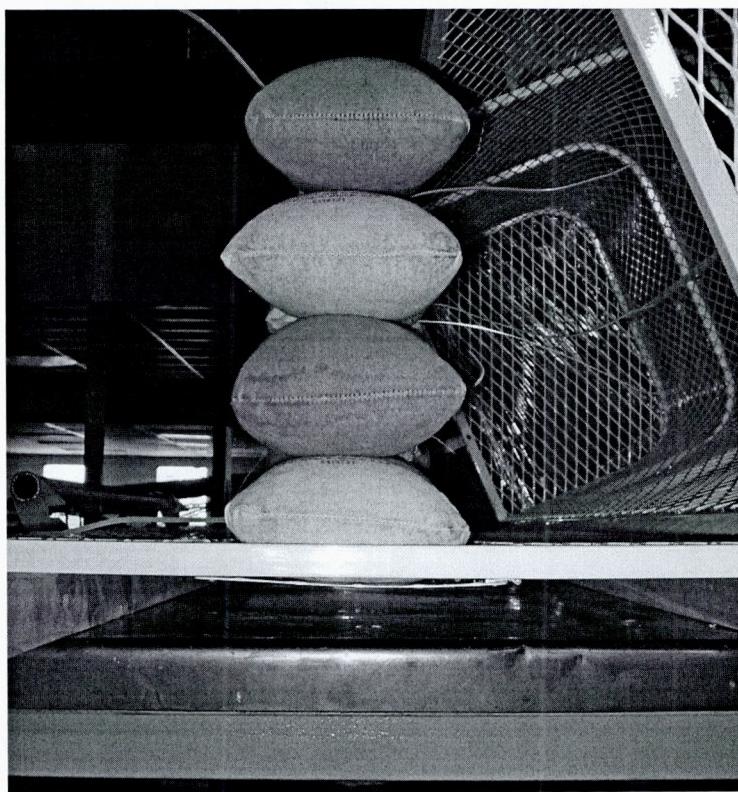


Figure 3 – Test (End View)

There was no permanent deformation of the door after the load was removed. The lid door is sufficient for installation on any configuration of the cargo basket, in any or all sections of the lid.